ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP COMMITTEE
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL

Game Branch / HPC Project Number:	15-510

PROJECT INFORMATION

Project Title: Mesa Re-entry Block C

Region and Game Management Unit: 27

Local Habitat Partnership Committee (LHPC):	**Was the project presented to the LHPC?**
• Safford	**YES**[X] **NO**[]

Has this project been submitted in previous years? YES[] **NO**[X]
If Yes, was it funded? YES[] **NO**[] → **Funded HPC Project #(s)**:

Project Type: Prescribed Burn

Brief Project Summary:
The Mesa Re-entry project consists of 23,016 total acres. The project area has been broken into 3 separate blocks (A, B, and C). Block A is 7,885 acres. Block B is 5,580 acres. Block C is 9,551 acres. Block C was treated with prescribed fire in the spring of 2012. Block B was treated with prescribed fire in the spring of 2013. Block A was treated with prescribed fire in the spring of 2014. Mechanical thinning has occurred and is ongoing in Blocks B and C.

There is a need to re-introduce prescribed fire into the Mesa project area to reduce tree densities, particularly among Juniper re-sprouts, and to create varying successional stages of browse species, which combined will stimulate herbaceous species growth leading to increased ground cover, more stable watershed conditions, and improved habitat and rangeland conditions. This project is in furtherance of the original Mesa Project, and addresses the need to follow up on previous efforts aimed at achieving a desired vegetative condition. It was predicted prior to implementation of the original project that a follow up treatment would be necessary to achieve long-term objectives. The Arizona Game and Fish Department and the Clifton Ranger District have identified the Mesa Re-entry Project area as a high priority for treatment to provide habitat improvement (cover and forage) for mule deer, Coues whitetail deer, Merriam's turkey and Mearn's quail, javelina, black bear, and non-game species.

The area was initially treated with thinning and prescribed fire in 2007, and contains potentially high quality habitat for several wildlife species. In the 2007 entries, project objectives were met unevenly, though some areas showed very good results. Juniper encroachment was not satisfactorily removed and in some areas there was insufficient improvement (increased vigor and productivity) in grass species. In the years since the last treatment, there has been a noticeable incidence of re-sprouts in juniper, indicating that the area could degrade quickly if the re-sprouts are not treated again while still susceptible to grass fires. There is a need to remove the juniper re-growth because it will hinder grassland vigor and productivity within the next 3 years. Decreased grassland productivity would negatively impact wildlife habitat by decreasing available forage. Priority will be to use a method that is not only cost effective, but one that most closely mimics natural fire cycles.

This habitat enhancement and wildlife management proposal is to treat 4,000 of the 9,551 acres in Block C of the 23,016 acre Mesa Re-entry project.

Big Game Wildlife Species to Benefit: Mule deer, whitetail deer, turkey, pronghorn, black bear, javelina, Mearn's quail, bighorn sheep, as well as non-game species

Implementation Schedule (Month/Day/Year):

Project Start Date:
February 1st, 2016

Project End Date:
May 31st, 2016

Environmental Compliance:
NEPA Completed: Yes[X] No[] N/A[]
Projected Completion Date: 2009

State Historic Preservation Office - Archaeological Clearance:
Yes[X] No[] N/A[]
Projected Completion Date: 2009

Arizona Game and Fish Department EA Checklist: N/A[X]
To be Completed by: _____
Projected Completion Date: _____

PROJECT FUNDING

Special Big Game License Tag Funds Requested:	**$** 45,000 for 4,000 acres in Block C
Cost Share or Matching Funds:	**$** 60,000 for 5,551 acres in Block A (WFHF or NFRR) **$** 25,000 estimated for salaries (WFPR)
Total Project Costs:	**$ 130,000**

PARTICIPANT INFORMATION

Applicant (please print): Justin J. Thompson	**Address**: 397240 AZ 75 Duncan, AZ 85534	**E-mail**: justinthompson@fs.fed.us
Telephone: 928-687-8613		**Date**: 08/21/2013

AGFD Contact and Phone No. (If applicant is not AGFD personnel):
Steve Najar (928)965-5066

Project has been coordinated with:
Safford HPC and Arizona Game and Fish

NEED STATEMENT – PROBLEM ANALYSIS:

There is a need to restore fire to this ecosystem to reduce tree densities and create varying successional stages of browse species, which combined will stimulate herbaceous species growth leading to increased ground cover, more stable watershed conditions, and improved habitat and rangeland conditions. The Arizona Game and Fish Department and the Clifton Ranger District have identified the Mesa Restoration Project area as a priority for treatment to provide much needed habitat improvement (cover and forage) for mule deer, Coues whitetail deer, pronghorn, rocky mountain bighorn sheep, Merriam's turkey, Mearn's quail, javelina, black bear, and non-game species.

Existing conditions within the project area indicates widespread encroachment of woody species (primarily alligator and one-seed juniper) into semi-arid desert grasslands and increased occurrence

within the Madrean evergreen woodland across the project area. Both of these processes have increased canopy closure reducing the amount of herbaceous ground vegetation. Previously, lack of fine herbaceous fuels due to historic grazing use and man's intervention to put out all fires has disrupted the natural fire return interval severely restricting the influence of fire as an ecosystem disturbance to maintain the diversity and productivity of the semi-arid desert grassland and Madrean evergreen woodland vegetative communities found within the project area.

The area was last treated with thinning in 2007 and prescribed fire in 2012, and contains potentially high quality habitat for several wildlife species. In the previous entries, project objectives were met unevenly, though some areas showed very good results. Juniper encroachment was not satisfactorily removed and in some areas there was insufficient improvement (increased vigor and productivity) in grass species. In the years since the last treatment, there has been a noticeable incidence of re-sprouts in juniper, indicating that the area could degrade quickly if the re-sprouts are not treated again while still susceptible to grass fires. There is a need to remove the juniper re-growth because it will hinder grassland/forb vigor and productivity within the next 3 years. Decreased grassland/forb productivity would negatively impact wildlife habitat by decreasing available forage. There is a need to use a method that is not only cost effective, but one that most closely mimics natural fire cycles.

Prescribed treatments intended to reduce tree canopies, lower tree densities, and provide a mosaic of browse successional stages are expected to stimulate subsequent growth of herbaceous species, increase ground cover which will stabilize the watershed, increase habitat heterogeneity, improve wildlife habitat, and provide opportunities for fire to be returned on more natural intervals to maintain vegetative conditions that are sustainable over time. This would allow for naturally occurring fires to resume their role in the ecosystem.

PROJECT OBJECTIVES: Overall objectives for the project are to:

1. Maintain areas of reduced canopy cover from past prescribed burn projects.
2. Reduce juniper resprouts by 60-70%.
3. Reduce canopy cover by 20-40% in areas where previous treatments were not effective due to low intensity fire.
4. Create and maintain a mosaic of vegetative seral stages which resemble vegetation conditions shaped by naturally occurring free spreading fire.
5. Enhance mule deer, white-tailed deer, turkey, pronghorn, bighorn sheep, and javelina habitat by re-establishing seral stages in woodland and shrub communities that depict natural variability from the effects of free-spreading fire, providing for forage, shelter, and breeding habitat.
6. Allow for fire (wildland fire for resource benefit) to resume its natural role as a disturbance in this fire adapted ecosystem.

PROJECT DESCRIPTION AND STRATEGIES: Overall project strategies are:

1. Mechanically thin identified areas within Blocks B and C *complete and ongoing*
2. Construct fireline along boundaries and around avoidance areas and improvements in Block C
3. Utilize prescribed fire in Block C to obtain project objectives
4. Construct fireline along boundaries and around avoidance areas and improvements in Block B
5. Utilize prescribed fire in Block B to obtain project objectives
6. Construct fireline along boundaries and around avoidance areas and improvements in Block A
7. Utilize prescribed fire in Block A to obtain project objectives

PROJECT LOCATION:
The Mesa Re-Entry Restoration Project is located on the Clifton Ranger District of the Apache-Sitgreaves National Forests in Greenlee County, Arizona. The prescribed fire project area encompasses 23,016 acres of National Forest system lands (see map 1). The project area has been divided into three Blocks ranging in size from 5,580 to 9,551 acres. The legal location of the project is: T2S, R29E, sections 1-6 and 8-12; T2S, R30E, sections 5-8; T1S, R30E, section 31; T1S, R29E, sections 8-10, 14-23, and 25-36; T1S, R28E, sections 22-28 and 33-36.

LAND OWNERSHIP AT THE PROJECT SITE(S)*:*
(if the project area is private property, please state specifically and provide the landowner's name)

- Project treatment area lies entirely within the Clifton Ranger District, USFS, Apache Sitgreaves N.F.

IF PRIVATE PROPERTY, IS THERE A COOPERATIVE BIG GAME STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?
YES[] NO[] N/A[X]

HABITAT DESCRIPTION:
There are four vegetation associations within the project area by acres for each vegetation association (see table 1). Past management has contributed to a change in forest structure and species composition in the proposed project area from juniper savannas with a historically open, scattered structure, to a dense, more closed canopy woodland reducing grasslands. Dense woodlands such as found on the mesa tops (former savannas) within the project area are more susceptible to larger scale stand replacement fires not characteristic of the historic fire regime of this area.

Table 1

	Cottonwood-Willow riparian	**Madrean Pine-Oak**	**Mixed Broadleaf**	**Semi-desert Grassland**	**Total Acres**
Block A	14	4,392	124	3,355	7885
Block B	0	4,605	57	918	5580
Block C	11	9,096	5	439	9551
Total Acres	25	18,093	186	4,712	23.016

ITEMIZED USE OF FUNDS: (Estimated)

HPC Funds

$7,500.00	Supplies (burn fuel, drip torches, PPE, tools, maintenance, etc.)
+ $7,500.00	Perdiem
+ $15,000.00	Crew Salaries
+ $15,000.00	Crew Overtime
$45,000	Total Funding for 4,000 acres of the 9,551 acres in Block C of the 23,016 Project total

Cost Share or Matching Funds (*for volunteer labor rates please refer to the worksheet below*)

$7,500.00	Supplies
+ $7,500.00	Perdiem
+ $40,000.00	Crew Salaries
+ $30,000.00	Crew Overtime
$85,000.00	Total USFS funding towards Block C

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:
Current cooperators are the Clifton Ranger District and the Arizona Game and Fish Department.

Potential partners include Arizona Deer Association, Mule Deer Foundation, Antelope Foundation, Arizona Desert Bighorn Sheep Society, SCI, Quail Unlimited, NWTF, Arizona Department of Agriculture (ADA), and the livestock permittees that will provide grazing allotment rest.

WOULD IMPLEMENTATION OF THIS PROJECT ASSIST IN PROVIDING, MAINTAINING, OR FACILITATING RECREATIONAL ACCESS?
YES[] NO[X] N/A[]

PROJECT MONITORING PLAN:
The proposed monitoring plan consists of several fire/range monitoring related plots within the project area. The plots have been read to complete the NEPA for the project and will need to be re visited due to post burn re-stocking guidelines outlined in the NEPA documents. In addition, photo points have been established which will illustrate the effectiveness of treatments. Similar data and photo points were used with prior restoration projects on the Clifton Ranger District and have proved effective at monitoring project effectiveness.

PROJECT MAINTENANCE:
The project area will be available for re-entry if monitoring shows lack of effectiveness. However, once objectives are achieved for each project, Wild land fire use may be employed as a maintenance tool to enhance and maintain the initial project investment.

PROJECT COMPLETION REPORT TO BE FILED BY:
The Project Completion Report will be filed by the USFS Clifton Ranger District Mesa Re-entry Project lead. At the current time this individual is Justin Thompson.

WATER DEVELOPMENT PROJECTS (*please use the worksheet below***):**

TREE CLEARING/REMOVAL PROJECTS (*please use the worksheet below***):**